



SMART AUTOMOTIVE AND MOBILITY SOLUTIONS FROM FINLAND

#FINLANDWORKS

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WHY FINLAND?

As vehicles become digitalized and connected, the future of mobility requires innovative solutions.

Finland does not necessarily come first to mind when thinking of the traditional automotive industry. But four megatrends in technology have brought this Nordic country to the forefront in reshaping the industry: connectivity, autonomous driving, shared services and electromobility.

The naturally entrepreneurial Finns are on the driving edge of new product development. They have created solutions based on IoT, AI and 5G networks for many applications, including automotive and mobile. In fact, with advancements like these, Finland is ranked the third most innovative country in the world according to the Bloomberg Innovation Index 2019.

What's more, the companies in the Finnish automotive and mobility cluster have the experience, expertise and vision to reshape our thinking about the way we see mobility.

RESHAPING DIGITALIZATION

A country that makes a digital difference, Finland has introduced countless technologies and digital services to the world. The Finns are renowned for their creative, user-driven solutions and sought-after technologies due to their holistic understanding of digitalization and the entire digital value chain.

Rapidly developing digital technologies are providing new revenue and value-adding opportunities. With solid success in developing innovative software solutions and delivering global projects, Finnish companies are well-positioned to make a lasting difference.

In the following pages, you'll discover more about the specific smart technologies that our Finnish automotive and mobility companies provide – and how they can drive your vision forward.

#1

HIGHEST DIGITAL COMPETITIVENESS IN THE EU

DIGITAL ECONOMY AND SOCIETY INDEX 2019

#2

SECOND MOST SKILLED WORKFORCE IN THE WORLD

WORLD ECONOMIC FORUM, GLOBAL COMPETITIVENESS REPORT 2019

#3

THIRD MOST INNOVATIVE COUNTRY IN THE WORLD

BLOOMBERG INNOVATION INDEX 2019

#1

IN AVAILABILITY OF LATEST TECHNOLOGIES

WEF GLOBAL COMPETITIVENESS REPORT 2017–2018

CONNECTED & AUTOMATED DRIVING

INFOTAINMENT, USER INTERFACE & EXPERIENCE



BITFACTOR

DIGITAL TRANSFORMATION AND SOFTWARE DEVELOPMENT



BITFACTOR



NEW MATERIALS AND SENSORS



ADAS AND AUTOMATED DRIVING



CONNECTIVITY & CYBERSECURITY



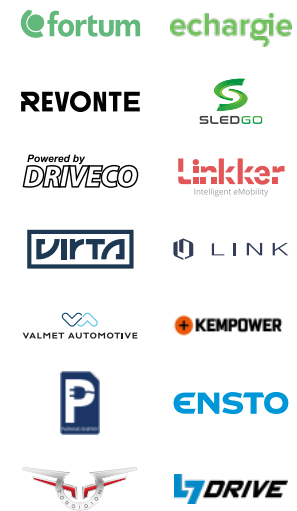
WEATHER SERVICE & ROAD CONDITIONS



MOBILITY SERVICES



ELECTRO-MOBILITY



TESTING



RESEARCH



1. CONNECTED & AUTOMATED DRIVING

The shift toward a connected and automated driving experience is changing our concept of what a car is and what a car's functionality can be. Electronics, software and connectivity all pose new service opportunities, from driver assistance systems and safety functions to improved entertainment systems.

The advantages of these developments are significant. Cars are becoming smarter. Transportation can be safer. And mobility is now playing a much bigger role in carbon-neutral sustainability.



INFOTAINMENT, USER INTERFACE & EXPERIENCE

Driver and passenger experience makes a significant difference in everyday mobility. A fully digital cockpit with versatile services and applications, sophisticated and personalized user interfaces and advanced multimodal in-vehicle interaction provide the ultimate customer experience.

Finland has extensive experience and is well known for its mobile and gaming industry. The country offers countless innovative companies specializing in:

- User experience and human-centric design
- In-vehicle infotainment technologies
- Embedded computer systems
- Audio-visual experience
- Next-generation digital cockpit



KANZI SOFTWARE FOR RAPID UI DESIGN AND IMPLEMENTATION

RIGHTWARE'S Kanzi UI and connectivity tools help manage increasing HMI complexity while enabling essential forward-looking user experiences. Automotive technology is advancing steadily, and the industry needs more highly integrated solutions for the next-generation digital cockpit. Kanzi provides designers seamless 2D/3D authoring with live preview and capabilities similar to modern game engines, while supporting all leading HMI platforms and operating systems. Accelerating design and development from prototype phase through

production, Kanzi products and services radically reduce time to market and cost for over 50 automakers globally, including Audi, Mercedes-Benz, Cadillac, Ford, Lincoln, Jaguar Land Rover, Peugeot, among many others.

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WE RESHAPE DRIVING FOR TOMORROW

SIILI AUTO is the world's premier creative technology studio fully focused on product creation and product innovation for next-generation mobility. Siili Auto, the portfolio company of the OMX Helsinki-listed company Siili Solutions, has quickly become a significant platform-independent player in global automotive industry software. The company has been helping automotive OEMs, Tier 1 integrators and digital service providers since 2013 to create digital cockpits, connected mobility services, mobile apps and next-generation digital user interfaces.

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SOFTWARE AND SERVICES FOR AUTONOMOUS DRIVE AND HMI DEVELOPMENT

BASEMARK helps customers to create products that run faster, consume less power and produce a premium-quality visual output.

Basemark is an industry leader in mission-critical, real-time compute and graphics software. The company provides Rocksolid Engine, a world-leading real-time compute and graphics software solution that performs machine vision, AI algorithms and graphic rendering quickly and securely.

Basemark Automotive Test Suite (BATS) is a professional system performance evaluation tool for anyone developing autonomous driving cars, digital instrument clusters and in-vehicle infotainments (IVIs) or System-on-Chips (SoCs) that power these systems.

The Basemark professional services team provides automotive customers with top-notch design, implementation and optimization services. We have successfully partnered with the world's leading automotive OEMs and Tier 1 companies developing L4/L5 autonomous drive, in-cockpit AR applications, instrument clusters and IVIs.

Basemark is specialized in solving complex autonomous drive challenges.

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CX INNOVATION AND IN-CAR EXPERIENCE

DIGITALIST GROUP is a creative technology company that helps companies deliver tomorrow's digital customer experiences and business models. In a world where everything is commoditizing except for brand value and experiences, we help create sustainable value with customer experience innovation and creative technology. Digitalist partners with automotive companies, from Volvo trucks to BMW and Honda electric vehicles, to create competitive advantage, differentiation and digital experiences that inspire and build

loyalty. From branding work to end-to-end in-vehicle infotainment (IVI) delivery, we work alongside clients to innovate offerings, tap into business potential and benefit new productivity-assisting companies – all the way from an original challenge through captured value.

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LEADING SOFTWARE PLATFORM FOR EMBEDDED DEVICE CREATION

QT has a strong presence in more than 70 industries and is the leading independent technology behind millions of devices and applications. Qt is used by major global companies and developers worldwide, and the technology enables its customers to deliver exceptional user experiences and advance their digital transformation initiatives.

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PERSONALIZE LUXURY WITH A SMART KEY

KORULAB provides a detailed and connected digital experience for your car to distinguish the brand from your competitors. The Koru platform is small, fast, flexible and complete. Using Koru's software development kit (SDK), you can power any interface your client can imagine. The framework can be tailored and extended with a customer-specific look and feel. It is the only graphics platform scaling from embedded hardware all the way to full-fledged 3D application processors.

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FLEXOUND Augmented Audio™ adds the sensation of touch to the audio-visual listening experience – be it music, games, television, streaming or movies. We enhance your customer experience by integrating our patented FLEXOUND Augmented Audio™ modules into car seats, cinema seats, furniture, cushions, gaming devices – or wherever personal stereo and the feel of sound adds value.

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COMPUTER VISION & IMAGING TECHNOLOGIES

VISIDON is a Finland-based company specializing in the development of AI-based image and video processing technologies. Visidon software products include automatic image and video quality enhancement, computational imaging and face recognition.

The company has been a trusted partner in the mobile industry for more than a decade, and our technology can be found in more than 1 billion mobile phones. Our focus on mobile devices has driven Visidon to create highly energy-efficient algorithms to improve camera capabilities. Visidon's

vision computing allows for better image quality even when not using high-end cameras. Visidon offers technology for optimizing the video quality of the cameras used in the vehicle and energy-efficient algorithms for driver monitoring.

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TUXERA

WORLD-LEADING EXPERTS IN STORAGE SOFTWARE

TUXERA is the market leader in data storage management software. We work with all the top Tier 1 suppliers and car manufacturers to deliver power fail-safe storage software for all data-critical automotive systems – advanced driver assistance systems (ADAS), digital video recorder (DVR), event data recorder (EDR), cluster and infotainment. Tuxera is a major contributor to the Linux community, a member of flash memory standards organizations, like SD Association and JEDEC. We work with world-leading chipset, memory vendors and operating system software

providers to develop edge storage solutions of tomorrow. Tuxera's patented software optimizes the read-and-write performance of automotive flash memory, provides proven data integrity and power fail safety, and reduces the lifetime-degrading effects of write and erase wear.

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YOUR TRUSTED SOFTWARE PARTNER

RCP SOFTWARE is your trusted partner for device hardware and software creation. Our services cover all phases of R&D from specification to maintenance. We excel in automotive sensor fusion, connectivity (including IoT, LTE, WLAN, BT and mesh) and embedded systems. We have also created CAN-based modules for automotive usage. RCP Software's highly reputable customers range from startups to stock-listed companies.

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SURFACE AUDIO AND HAPTICS SOLUTION

PS AUDIO DESIGN OY provides PSAD Audio Surface and Haptics solutions with superior customer experience for various applications. With our audio innovations, manufacturers can radically renew and improve customer experience as well as significantly reduce costs. The technology is already used in high-end mobile devices.

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DISPLAYS WHAT MATTERS

LUMINEQ is thin film electroluminescent displays (TFEL) have been serving critical applications in extreme conditions for the past 30 years. Our mission is to provide customers with the most durable and transparent displays while improving vehicle safety. LUMINEQ displays are used in a wide array of mobility applications: aircraft, cars, trucks and buses, trains and trams, tractors, heavy equipment and marine. LUMINEQ transparent displays enable manufacturers to break the design boundaries of conventional vehicles by turning any glass surface, such as windshields

or side windows, into interactive see-through displays. Our automotive display portfolio includes various head-up display (HUD) solutions and in-glass laminated vehicle displays. LUMINEQ displays are designed and manufactured by Beneq, an international technology company headquartered in Espoo, Finland.

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THE WORLD'S MOST ADVANCED VR/XR FOR INDUSTRIAL USE

VARJO makes human-eye resolution virtual and mixed reality products that help professionals in the most demanding industries. Ultimately, Varjo is creating a new kind of immersive computing, where virtual, augmented, and physical realities become one.

By delivering the world's only photorealistic VR/XR, Varjo allows designers to create and interact with true-to-life virtual prototypes, translating into faster turnarounds and massive savings in time and modeling and development costs.

Varjo VR-2, VR-2 Pro and XR-1 Developer Edition are the only head-mounted displays (HMDs) that allow industrial design, modeling and prototyping processes to be moved to photorealistic VR/XR, allowing you to alter and evaluate what you're working on in real time or as you go. With Varjo, every detail, shape, shadow and color come into true-to-life focus. Seeing more details in the design process is a breakthrough because, for the first time, you can see the metallic flakes in the paint and perceive the depth and quality of the material shaders. You can see the beauty of the details more than ever before in the virtual world.

With Varjo XR-1, designers can work with their colleagues in the physical design space they are used to and collaborate on photorealistic, real-scale virtual car models while seeing their hands and bodies.

In an immersive mixed reality experience like this, professionals are able to talk as they go, give immediate feedback and run more engaging reviews.

Varjo's technology takes HMI design to the next level. Varjo's HMDs enable you to test your vehicle designs by performing realistic user studies, such as virtual test drives, and get actionable data with integrated eye-tracking technology. Professionals can make decisions with greater accuracy and at a fraction of the cost of building physical prototypes.

Photorealistic VR/XR enables companies to showcase high-value products inside flagship stores, showrooms, fairs and events in photorealistic visual quality. It's the only technology that can create a truly immersive marketing or sales experience.

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ADAS AND AUTOMATED DRIVING

Advanced driver assistance systems (ADAS), based on electronic systems and sensors, increase both car and road safety.

In Finland, numerous innovative companies are focusing on ADAS and automated driving, along with:

- Machine learning
- Computer vision
- Sensor fusion
- Safe driving in harsh weather and winter conditions





CUTTING-EDGE SOFTWARE DEVELOPMENT SOLUTIONS

UNIKIE offers technology assets and develops cutting-edge solutions for automotive, heavy industry and intelligent machines. We focus on ADAS, telematics, analytics and machine vision solutions along with software and algorithms. With our competence and unmatched service, clients can accelerate their R&D to a completely new level.

Unikie's technology has been successfully applied in the following products:

- UNIKIE AI VISION – Sensor fusion, application interfaces, data processing, algorithms, data engines and APIs for AI, neural networks, deep learning and more
- AINO.IO – Secured and monitored integration between systems
- UNIKIE DRIVE – Cloud data platform for analyzing and visualizing sensor data from various sources
- UNIKIE COMMUNICATION SDK – Development kit for creating rich communication services-based messaging, voice and video applications

Our customers include Huawei, Sandvik, Sanoma, Nokia, M-Files, Fara, Sfara and others.

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AUTONOMOUS DRIVING FOR ALL WEATHER CONDITIONS

SENSIBLE 4 develops autonomous vehicle technology for harsh weather conditions and difficult environments. The company's autonomous driving system is tailored for driverless shared mobility customers, such as buses, taxis, rental cars, pod manufacturers and operators of large self-driving fleets. One of the key advantages of Sensible 4's software is that it filters out outliers from the air – such as snow, rain and fog – and allows autonomous vehicles to drive on roads without lane markers and landmarks.

The autonomous driving system comes as a full-stack solution or as independent software modules. Sensible 4 is also the company behind the award-winning, self-driving shuttle bus GACHA designed by MUJI, which was released in March 2019.

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LEADER IN TURNING CAR DATA INTO REAL BENEFITS

E3 INNOVATION'S E3 Sense monitors your vehicle – on the move – and its performance, the driver's behavior, along with road conditions and road quality. It provides you with real-time information for optimal performance. The data needed for E3 Sense is provided by an additional E3 Blue device, a vehicle computer, which records information from the CAN bus of your car. It produces a lot of data for you about the conditions of your car and the road you are driving on.

In addition, E3 Blue is similar to an airplane black box, showing what happened if an accident occurs. Along with E3 Blue, we offer an additional three services: E3 Tire Monitor, E3 Black Box and E3 Streamer.

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REAL-TIME HDR VISUAL ANALYSIS

KOVILTA offers a range of innovative solutions that can be utilized for challenging image analysis applications. Some of our solutions include efficient pixel-level computation, integration to higher level image content analysis systems, compact embedded camera platforms and solutions for autonomous smart camera operation. Kovilta develops smart, high-dynamic-range cameras for real-time situational awareness. Kovilta's parallel focal-plane sensor processor technology takes the task of heavy image analysis right next to the sensor pixels. Locally adaptive exposure allows operation in all illumination conditions.

Critical visual feature data can be extracted in less time than it takes to transfer data out of a traditional camera for processing. Kovilta's products include proprietary KOVA sensor-processor integrated circuit (IC) chips, embedded camera modules, and image analysis algorithms and software interfaces. Kovilta's customers are international R&D service clients.

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EPEC

YOUR CHALLENGE,
OUR INSPIRATION

EPEC is a system supplier specializing in advanced electrics / electronics for efficient, safe and connected mobile machines and off-highway and commercial vehicles. We develop and manufacture control systems, electromobility systems and ADAS. By being close to our customers, we continuously co-create and innovate sustainable future technology solutions that make a difference.

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SILO_{AI}

WORLD-CLASS COMPUTER
VISION EXPERTISE

SILO AI is the largest private AI lab in the Nordics to offer scalable expertise in machine learning, computer vision and natural language processing. Silo AI provides customizable AI solutions and infrastructure with support and maintenance, as well as a framework for machine learning and computer vision. We cover sensor fusion, object and image classification and segmentation, and environment modeling.

Silo AI serves clients across several industries on four continents and has a strong foothold in the automotive and maritime industries.

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DIGITAL TRANSFORMATION AND SOFTWARE DEVELOPMENT

The car is becoming a smartphone on wheels. Still, automotive OEMs and Tier 1 providers are too big, too slow and too traditional to adopt new trends. Many lack the know-how and capabilities needed to create an exceptional user experience with digitalization and other advanced technologies. So, they are forced to look for innovations outside their own companies.

Finland has companies with just the needed innovations, good track records and expertise in:

- Software integration
- Digital service design
- Agile software development
- Big data analytics



futurice

WE ARE BUILDERS, INNOVATORS, CHANGE-MAKERS

FUTURICE helps design, build and launch new digital products and services by targeting growth opportunities through design and data-driven experimentation. Futurice brings together lean startup, design thinking and agile development techniques to help organizations imagine, envision and create the future. Combining human-centered design with data science, Futurice solutions are infused with empathy for – as well as insight into – customer motivations, behaviors and values. Futurice customers span financial services, media, automotive, energy and more.

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Reaktor

A STRATEGY, DESIGN AND TECHNOLOGY PARTNER

REAKTOR provides high-quality end-to-end design and software engineering for automotive and aviation needs. Our offering includes vehicle infotainment, aircraft connectivity, in-flight entertainment and autonomous watercraft.

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VINCIT

WE HUMANIZE SOFTWARE DEVELOPMENT

VINCIT is a custom software development and design agency that creates digital services and software applications from idea to market. Founded in 2007, we currently employ an expanding team of 500 experts in California and Europe. Our passionate team of developers and designers delivers best-in-class service with cutting-edge engineering solutions. Partnering with us means you'll be receiving a fully immersive customer experience every step of the way. Through creative collaboration, data-driven results and expert insight, we are here to provide our clients with the tools to propel their business forward.

Vincit is committed to designing a smarter future and fostering an environment where the sky's the limit to innovation. We embrace change and want to help reimagine processes and leverage emerging technologies to build sustainable competitive advantage for our customers.

Vincit's long-term goal is to continue to expand our business horizons and positively transform the visions of the partners we work with.

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BITFACTOR

VERSATILE SOFTWARE DEVELOPMENT POWERHOUSE

BITFACTOR is a highly versatile software development powerhouse experienced in digital cockpits and vehicle sharing through smartphone applications. Our projects range from connected automotive solutions to smart TVs and mobile devices. We are a global service partner of The Qt company with expertise in creating tailored software on top of the Qt framework.

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THE LEADING DEVOPS COMPANY IN FINLAND

EFICODE is a group of 340 DevOps coaches, engineers and cloud specialists building the best software-driven organizations in the world. Eficode currently operates in 7 countries: Denmark, Finland, Germany, the Netherlands, Norway, Poland and Sweden. Our key industries are automotive, with customers such as Volvo Group and Valmet Automotive; finance, with customers such as ABN Amro and OP Bank; and telecom, with customers such as DNA and Telia.

In practice, this means hundreds of DevOps audits, DevOps transformation programs and DevOps platform implementations.

We are building communities of practice within our customers' businesses and helping them choose best-of-breed DevOps tools as part of their DevOps, digital and cloud transformation journeys.

Our industry recognitions include:

- Atlassian's DevOps Partner of the Year (2018 and 2019)
- Gartner's DevOps Hype Cycle – 2020 Sample Vendor of DevOps Value Stream Management Platform (VSMP), Eficode ROOT DevOps Platform

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CONNECTING THE DOTS BETWEEN DATA, TECHNOLOGY AND PEOPLE

CGI is a global IT and business consulting company. We work together with our clients to develop services and IP with first-class customer and user experience. Our transportation services in Finland for cities, authorities and private companies keep both people and goods moving. By combining data, technology and people, we create new business and innovation on land, at sea and in the air through our extensive ecosystem of clients and partners.

Technology is key to achieve a greener future. Our services combining artificial intelligence, optimization and data analytics support our clients in their journey of creating more sustainable transportation.

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BRIGHTER FUTURE. TOGETHER.

TIETO is one of the market leaders in providing European smart traffic and automotive companies with software R&D services and consultancy.

Our service areas include:

- Cockpit technologies – HMI (human-machine interface), IVI (in-vehicle infotainment) and instrument cluster-related competencies, capabilities and software development
- ADAS and safety – advanced driver assistance systems and functional safety-related software competencies, capabilities and development
- Connected car – V2X (vehicle-to-infrastructure (V2I) and vehicle-to-vehicle (V2V)) connectivity capabilities from short-range to long-range connectivity as well as in-car connectivity.

In addition, our core capabilities include positioning / navigation technologies, application development and cloud platform engineering

- Telematics and fleet management – end-to-end (E2E) connectivity capabilities and support for fleet management solutions

Tieto has automotive delivery centers in Finland and Poland, with several hundred skilled experts.

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CONNECTING SUPPLIERS TO CUSTOMERS WITH GLOBAL FREIGHT CORRIDORS

VEDIA makes international supply chains transparent to companies, logistics service providers, authorities and customers, thus promoting sustainable and digital logistics corridors. The Vedia service offering includes Vedia CaaS for transparent and sustainable logistics, Vedia Claus for home delivery service (roadside management unit), IoT devices and connectivity for tracking services.

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GOFORE

PIONEERING AN ETHICAL DIGITAL WORLD

GOFORE is your digital ally in times of change. We'll help you to identify and embrace new digital ways of thinking and doing that will have a positive impact on your business and society. In Finland, we have been accelerating versatile innovation projects within the transportation sector – renewing the traffic management ecosystem, enabling the switch to electric cars, transforming global transport services and exploring the endless possibilities of Mobility as a Service. We tailor the right solutions and services for your needs, so you can create good growth with your business.

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FACT-BASED VISIBILITY TO YOUR OPERATIONS AND EFFICIENCY

MILLISECOND provides fact-based visibility to your operations and efficiency. It collects real-time business operations data and fleet information for any brand. Our Millisecond solution can also combine and collect cost and revenue data from your other relevant data sources. The utilization of modern and secure technologies enables GDPR-compliant consent management, data economy and data sharing.

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www.millisecond.fi



HOME OF ENGINEERING & EXPERTISE

COMATEC'S intelligent electronic control units (ECUs) and infotainment units provide a quick entry point into vehicle automation. Vehicle technology and automation help you create interconnected vehicles and enable efficient and quick fleet management. Make your vehicle smart and transparent by utilizing the possibilities of smart vehicle IoT solutions in a way that best benefits the user and the designer. Microteam, part of the Comatec® Group, offers the best tool for creating distributed automation systems for automotive applications.

Comatec Group works with vehicle and mobile machinery manufacturers. The company's long experience with bus manufacturers and its capabilities in electrical and hybrid technology are evidenced by its extensive customer base.

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WE SAFEGUARD OUR CUSTOMERS' FUTURE

INSTA DIGITAL is an accelerator of secure digitalization with a strong background in automation. Our central focus is on service design, software development, cybersecurity and analytics. We work with multiple global forerunners in maritime, mining, logistics, aviation, agriculture and the process industry. Digitalization involves leadership, people, business and processes – and technology is only an enabler. Business goals are reached when technology is used to automate manual work and to create new business based on data. This is where we generate value for our

customers. Whether assessing the current state, creating a digitalization roadmap, accelerating innovation or providing high-value product development services, Insta is worthy of your trust.

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CONNECTIVITY & CYBERSECURITY

Connected cars rely on wireless and cellular communication interfaces that expose them to underlying security risks. As digitalization and the amount of data grow, so does the challenge of keeping huge quantities of data safe.

As one of the 5G forerunner countries, Finland has companies with extensive experience managing high bandwidth requirements as well as a mobile solutions ecosystem. These companies are experts in delivering secure solutions for optimized data usage and customer retention.

Some of these expertise areas where Finland excels include:

- IoT solutions
- Remote and wireless connectivity, including 5G
- Cybersecurity and other security functions
- Remote diagnostics and predictive maintenance



Bittium

TRUSTED CONNECTIVITY

BITTIUM provides intelligent, secure software solutions and professional engineering services for the automotive industry. Our high-quality solutions and services help automotive industry suppliers create secure, reliable, connected, intelligent and easy-to-use in-vehicle systems with a shorter time to market.

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NOKIA

MAKING JOURNEYS SAFER, MORE EFFICIENT AND MORE FUN

NOKIA, a global leader in the technologies that connect people and things, is a founding member of the 5G Automotive Association (5GAA) and 5G Alliance for Connected Industries and Automation (5G-ACIA). The 5GAA aims to bring automotive and telecommunications companies together while 5G-ACIA's goal is to bring the best possible applicability of 5G technology to connected industries.

Products and services:

- Enhanced C-V2X connectivity and automotive/transport data management
- Edge computing for intelligent transportation systems (ITS)
- Over-the-air connected car services, including real-time software updates and sensor-based preventive maintenance

- Managed connectivity to connect carmakers and their cars and customers (Nokia WING)
- Private 4G/5G networks for vehicle manufacturing

Customers:

Communication service providers, governments, road administrators and enterprises, including carmakers.

CONTACT

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www.nokia.com/networks/industries/automotive/

DEAL

DEAL COMP OY

DEAL COMP EDGE SOLUTIONS

DEAL COMP offers innovative connectivity and data-processing edge solutions for in-vehicle and mobile applications, such as bus and railway transportation, public safety, logistics and smart cities. Our paradigm experience and R&D capabilities in complex rugged embedded systems design, leading wireless and connectivity technologies in 5G, Bluetooth Low Energy (BLE), vehicle-to-everything (V2X), lower-power CPU technology and system integration give us the ability to address a wide scope of IoT edge projects. Deal Comp focuses on information for public transport (ITxPT), sensor and vehicle bus interfacing, video

and image processing as well as remote data accessing, sharing, interfacing and visualization on a cloud platform. Founded in 1992 by leading experts in the industry, Deal Comp brings intelligence to edge solutions, connecting devices and delivering valuable data to business applications.

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capricode
SYNCSHIELD

VERSATILE DEVICE MANAGEMENT PLATFORM

CAPRICODE provides smart tools to manage connected devices automatically. These include remote management of security functions and settings, as well as management or update of applications and firmware. The company's SyncShield product is a field-proven and patented over-the-air device security solution which manages large device fleets in automotive, mobile and IoT domains. SyncShield brings an additional level of automation to any IoT platform and is easy to integrate with

other backend systems. With the help of SyncShield, you can add devices securely as part of the digitalized business process and easily enable new business opportunities in various after-sales services.

CONTACT

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LEADER IN PROVIDING INVESTMENT-FREE ASSET TRACKING SOLUTION

KALTIOT was established in 2014 to commercialize our unique messaging solution for IoT devices – Kaltiot Smart IoT. This solution provides bi-directional, always-on-line, secure and device battery-optimizing communication that works in constrained or low-end devices and sensors and in lossy wireless networks. Our world-class IoT solution shortens time-to-IoT enablement. We provide easy-to-deploy Kaltiot Smart Gateway SDK, easy-to-use device management, fully functioning backend and interface with

bi-directional secured data transfers to our client's business intelligence solutions. Recently, we have used this advanced technological platform to create Kaltiot Smart Tracker – a universal tracking solution, which utilizes existing infrastructure, works both indoors and outdoors and can be used to share data between organizations securely. The solution enables tracking assets or people by using smartphones, Bluetooth beacons or the Smart Tracker mobile application. This solution is powered by Kaltiot Smart IoT Platform and our cloud service.

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DOES IOT FOR YOU

EMBELIN provides product development services from hardware and embedded software to cloud services and mobile apps. We have years of experience building customer success stories on our REMUC IoT platform. Our secure, flexible and scalable REMUC IoT platform enables agile product development for a wide selection of customer business areas. The REMUC IoT platform gathers data from the target device. With REMUC, you can control and manage devices, positioning, data collection and visualization. We offer solutions for product development and manufacturing,

connectivity, cloud services, after-sales and payment services. Embelin's customers include retrofitting and transportation companies and high-tech companies with connectivity and remote management needs. Webasto, Proventia and John Deere are some of our references.

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F-Secure.

WE SEE THINGS OTHERS DON'T

F-SECURE is a leading cybersecurity company with an understanding and extensive experience in hardware security engineering and its convergence with software. Our know-how is a result of extensive experience with automotive and aviation sectors and a deep understanding of the interaction between safety and security, software and hardware.

Our core services for automotive companies include design review, code review, penetration testing, security engineering and safety convergence.

CONTACT

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NEW MATERIALS & SENSORS

New materials and sensors are changing the standards for automotive design and efficiency. Such innovative materials help create lighter, safer components and structures. And today's vehicles are increasingly relying on sensors that are smart, responsive and dependable.

Sensors and structural electronics play a vital role in communication, emission control, engine fault diagnosis and road hazards as well as responding to traffic conditions.

When it comes to new materials and sensors, Finland excels in:

- Structural and stretchable electronics
- Decorative parts and 3D touch surfaces
- Innovative sensor technology and real-time situational awareness
- Sensor-based IoT solutions



CANATU®

PROGRESSIVE LEADER IN CARBON NANOMATERIAL SOLUTIONS

CANATU shapes surfaces into experiences with its 3D formable and stretchable films and sensors for touch and heater applications. These transparent, conductive films and sensors can be integrated into any surface and any shape, enabling design freedom and intuitive user experience. Tactile touch controls can be seamlessly integrated into unconventional places in automotive interiors, replacing mechanical controls with sleek and unobtrusive designs, improving usability and reducing driver distractions.

Canatu 3D heaters keep ADAS sensors and LED lights clear for safe and autonomous driving in any weather. Canatu's revolutionary solutions make any surface smart, enhancing safety, HMI and design.

CONTACT

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TACTOTEK

A GLOBAL LEADER IN INJECTION MOLDED STRUCTURAL ELECTRONICS

TACTOTEK creates stylish and seamless driving environments with desired electronic features and controls. IMSE™ transforms car interiors into functional smart surfaces with touch controls, lighting and electronic functions. IMSE renews surfaces into smart molded structures with responsive touch controls, illumination and wireless connectivity. IMSE integrates printed electronics and electronic components within thin, lightweight, durable and mass-producible 3D injection molded plastics. Surfaces

range from wood and fabric to plastics. IMSE enables electronics to be integrated into new shapes and uses. TactoTek customers operate in the automotive, IoT, wearables, appliance and medical sectors.

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FORCIOT®

UNIQUE PRINTED STRETCHABLE ELECTRONICS WITH ADVANCED ALGORITHMS

FORCIOT, a Finnish technology company headquartered in Tampere, develops advanced IoT sensor solutions. Forciot's unique stretchable electronics solution accurately measures and reports force, weight, balance and pressure. The innovative printed electronics solution can also be utilized as an HMI touch controller, responding to gesture or to replace buttons in elastic environments, such as car interiors. Due to the advanced reading algorithms and related machine learning elements, the Forciot system self-calibrates

to ensure accurate measurements and functionality throughout the lifecycle of the product. Forciot's key business areas are the automotive, logistics and wearable sectors.

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modulight

LASERS FOR BETTER LIFE

MODULIGHT makes lasers and optics for better life. Today, most cars, cell phones and many food products are using lasers for LiDAR and other sensing applications to improve the safety and productivity of transportation. The same technology is used in consumer products to ease the use, expand the functionality and enable completely new solutions, from relatively simple gesture recognition to safety and security. For 20 years, we have brought customized and certified lasers to a wide range of industries to make people's lives better.

CONTACT

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ENABLING SAFE AND AUTONOMOUS DRIVING

MURATA is a globally leading manufacturer of electronics components and solutions. We contribute to the advancement of society with innovative sensor technology that makes driving safer and improves the quality of life. Our vision is to enable safe and autonomous driving. Our micro-electromechanical systems (MEMS) sensors provide crucial reliability and accuracy in various applications. Murata manufactures high-performance accelerometers and inclinometers for safety-critical automotive, industrial and healthcare applications. We also develop angular rate sensors with or without accelerometers for automotive, industrial and healthcare applications. Our customers are Tier 1 companies, world-leading companies in automated driving as well as various industrial and medical companies worldwide.

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WEATHER SERVICE & ROAD CONDITIONS

Weather is a risk factor in automotive collisions. In fact, 22% of all traffic accidents are due to poor weather. Better motor vehicle engineering and roadway maintenance can reduce weather-related driving risks.

In new cars, data on road conditions, road friction and infrastructure maintenance help make driving ever safer.

The saying, “If it works in Finland, it functions anywhere,” explains why Finnish companies offer unsurpassed services for:

- Autonomous snow driving tests
- Advanced road condition information
- Icy road and other driving hazard alerts
- Sensor and measurement technology



VAISALA

THE ROAD WEATHER SPECIALIST FOR AUTOMOTIVE

VAISALA is a global leader in environmental measurements and technology. We provide our customers reliable measurement devices and digital solutions for better decision-making, safety and efficiency.

Our digital solutions for automotive applications include:

- Infotainment & road weather – high-resolution atmospheric and road weather forecasts for route-based services and navigation to keep drivers safe and improve travel convenience

- Road condition for ADAS & AD – first-in-market custom solutions for automated driving to enable safe operation and availability
- Air quality information and forecasts
- Pavement defects – automated mapping and classification of pavement defects using computer vision

Our automotive solutions provide infrastructure stakeholders and connected vehicles with detailed insights into the state of road surfaces along the entire road network.

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TECONER

MOBILE ROAD WEATHER MONITORING SYSTEMS

TECONER designs, produces and markets innovative mobile road weather measuring systems based on optical technology.

Our system assists in planning the winter maintenance operations and in controlling operational quality along the road network and at airports. Information on surface condition, friction, water layer thickness, surface temperature and dew point is provided to the vehicle driver in a user-friendly format. The same data can be viewed in near real time in the maintenance operation centers.

Optimizing the use of de-icing agents decreases the environmental impact of the activities. The data complements the information from fixed weather stations and contributes to improvement of road and runway weather forecasts.

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WORLD-LEADING METEOROLOGICAL EXPERT SERVICES AND WEATHER INFORMATION SYSTEMS

FINNISH METEOROLOGICAL INSTITUTE'S (FMI) mission is to produce high-quality services and scientific knowledge on the atmosphere and seas. We develop and run our own atmospheric, marine and road weather models to provide safety and added value for all transportation modes. The main objectives are to provide the best possible information about the atmosphere above and around Finland, ensuring public safety and fluency related to weather and conditions. FMI possesses wide expertise in R&D and end-user services.

Some of our key research areas include the development of innovative and intelligent road weather models. FMI is also studying the possibilities of exchanging weather and safety data directly with road users via its experimental combined Road Weather Station and Roadside Unit (RWS/RSU) concept station installed nearby FMI facilities in Sodankylä, Northern Finland.

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MAKING ROADS SAFER

ROADCLOUD makes driving safer. Are you working toward self-driving cars or digital road maintenance? Do you want to improve the performance of existing active safety systems with road friction estimates? Integrating RoadCloud's friction estimates into a collision mitigation system, such as autonomous emergency braking (AEB), reduces crash energy by up to 80% on icy roads. Road maintenance costs, in turn, can be cut by as much as 20% with the help of our data. RoadCloud also provides proactive road friction and quality data as a service

to facilitate the pursuit of autonomous driving. Our data makes it possible to issue targeted warnings, monitor road networks in real time 24/7 and optimize maintenance efforts accordingly.

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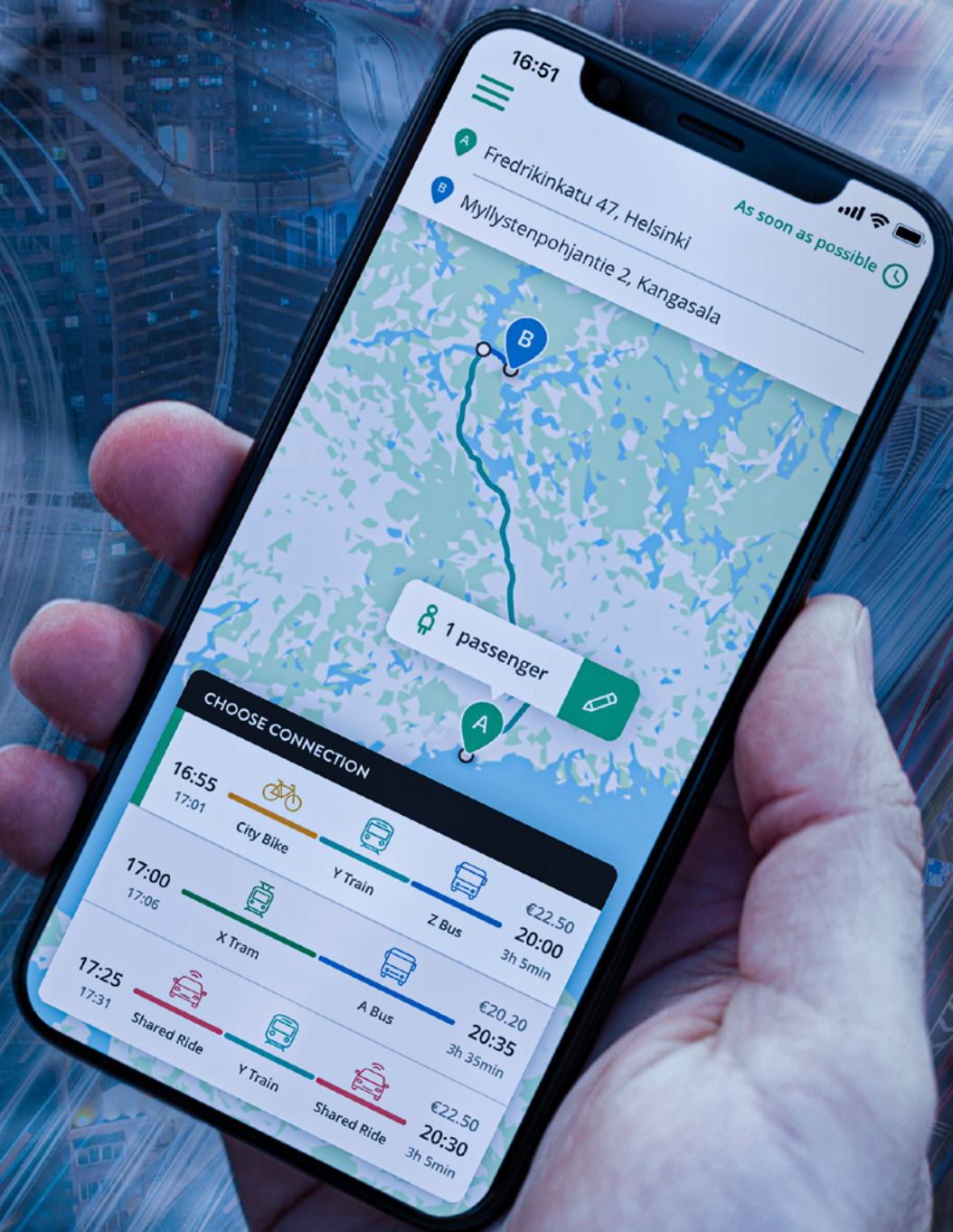
2. NEW MOBILITY SERVICES

Thanks to new technologies, a deep transformation is taking place as the traditional automotive industry transitions into a service-oriented one.

While older generations may be content with investing in a new car every few years, younger people are more comfortable with shared services to get from point A to point B. They're equally content, whether they own the car they're riding in or not.



MOBILITY AS A SERVICE (MAAS)



Merging intelligent mobility with the modern urban environment is very normal in Finland. The Finnish Mobility as a Service (MaaS) ecosystem – supported by open data, APIs and progressive regulation – is a perfect example.

With the world's first mobility operator, MaaS Global, and the world's first Mobility as a Service ecosystem, Finland knows what it takes to be connected, autonomous, shared and electric.

When it comes to mobility, Finland clearly leads the way:

- User experience and human-centric design
- In-vehicle infotainment technologies
- Embedded computer systems
- Audio-visual experience
- Next-generation digital cockpit

Maas

GLOBAL

THE WORLD'S 1ST MAAS ECOSYSTEM

MAAS GLOBAL is making the concept of Mobility as a Service a reality by building the world's first mobility ecosystem. Imagine if all your daily travel needs were covered by one simple app, with one simple payment – directly from your mobile. Travel as much as you like at a flat fee or pay as you go by bus, train, taxi, bike, car and more. Our revolutionary mobile app Whim liberates people from timetables, fixed routes, parking worries and the high costs of owning a car. Born out of a need to be spontaneous, Whim gives people access to a

huge variety of transportation options. A Whim subscription means true freedom of mobility. We aspire to upgrade the service level of transportation by joining together public and private transportation providers.

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KYyti

ACCESS TO SUSTAINABLE AND INTERMODAL MOBILITY

KYYTI GROUP offers a modular Mobility as a Service (MaaS) platform which enables user-friendly access to sustainable and intermodal mobility. Kyyti plans, designs and deploys customer-branded solutions for municipalities, public transport authorities, transport operators and corporations. These solutions create better collaboration between public and private mobility service providers. Kyyti helps customers reduce the environmental burden of transport and build personalized, inclusive and efficient mobility services in urban and rural areas

for the benefit of society as a whole. MaaS solutions include a white-label app, fleet management systems and integrated planning and business tools. The scalable platform connects everything needed for seamless mobility into an easily accessible solution.

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OTHER MOBILITY SERVICES

As new business ideas about mobility emerge and gain traction, Finland also offers a wide selection of other comprehensive mobility services for all kinds of stakeholders:

- Last-mile mobility
- Smart parking solutions
- Traffic planning and management systems
- Transportation planning and route optimization
- Mobile payments and ticketing
- Traffic data and monitoring systems



SITOWISE

CREATING A FUTURE DIGITAL LANDSCAPE & MOBILITY

SITOWISE is one of the largest planning and consulting agencies in Finland for the built environment, a leading expert in diversified urban projects, and a forerunner in data-driven management and data modeling. Sitowise is leading the way toward the new era of digital built environment and mobility. The smart city experts at Sitowise are revolutionizing mobility and MaaS solutions, public transport and logistics and traffic information service development. In mobility and logistics, we are especially focused on implementing solutions for

daily public sector personal and goods transportation schemes. Improved use of capacity and state-of-the-art on-demand solutions with MaaS integration are our expertise.

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PayiQ®

SMART TICKETING FOR A SMART FUTURE

PAYIQ develops the award-winning account-based Ticketing as a Service platform PayiQ TaaS®. This platform enables smart cities, MaaS and transport operators as well as event organizers to sell and validate tickets through mobile devices. Tickets can be bundled into multimodal trips or experiences that combine transport, events and services. The platform also gathers data on usage and movement on behalf of the service provider to be

used to improve customer experience and process efficiency. PayiQ leads the way to a smarter and more user-friendly world of transportation.

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Aplicom®

A LEADING EUROPEAN VEHICLE TELEMATICS DEVICE AND AUTOMOTIVE IOT SYSTEM PROVIDER

APLICOM designs and manufactures professional telematics devices and provides software, support and consultation services for them. Designed for use in vehicles and industrial machinery, Aplicom devices and telematics software offer a versatile and reliable platform for telematics, telemetry and IoT solutions. Aplicom partners with service providers and system integrators to offer complete solutions for their customers. We also deliver telematics devices directly to vehicle and machinery OEMs for their own telematics and

IoT solutions. Today, Aplicom products are used in nearly 50 countries worldwide, and the company is an approved supplier for several major vehicle and industrial equipment manufacturers. All products are designed and manufactured in Finland.

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RAMBOLL

Bright ideas. Sustainable change.

CREATING LIVEABLE PLACES

RAMBOLL is a leading engineering, design and consultancy company. Founded in Denmark in 1945, the company employs 2,500 experts in Finland and 16,500 globally. We have especially strong representation in the Nordics, the UK, North America, Continental Europe, the Middle East and Asia-Pacific. With 300 offices in 35 countries, Ramboll combines local experience with a global knowledge base. We constantly strive to achieve inspiring and exacting solutions that make a genuine difference to our clients, their end users and society at large.

Ramboll works across the following markets – buildings, transport, planning & urban design, water, environment & health, energy and management consulting.

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MODERN TRANSPORTATION PLANNING

NFLEET is an online transportation service for efficient planning. From transportation order and vehicle information, NFleet generates an optimized plan for the whole operation. Quick to implement, NFleet covers the complete range from strategic planning to operational control for both classic and multimodal transportation. Our highly advanced but easy-to-use road transportation optimization tool features geocoding, convenient UI and various integration methods. With NFleet services, customers save time, money and

the environment. NFleet, an IT startup company in central Finland, offers a SaaS business-to-business solution for optimizing transportation planning. The company is a University of Jyväskylä spin-off in business since 2014.

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DATA-DRIVEN BUSINESS AND SERVICES

SOLITA is a community of highly skilled experts geared for high impact and customer value. Our unique service portfolio combines expertise from strategic consulting to service design, software development, analytics and data science, cloud and integration services. We help leading Nordic companies and public sector organizations develop their business using data, customer insights, innovation and modern technology. Solita is a forerunner in creating services and systems for the traffic, automotive and transportation sectors. Used for air, rail, road and sea,

our solutions enable business-critical operations and traffic management, predictive maintenance, customer service and security. Founded in 1996, Solita is a fast-growing community of over 1,000 professionals in Finland, Sweden, Denmark, Estonia, Belgium and Germany.

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VALUABLE INFORMATION ABOUT THE INFRASTRUCTURE

AUTORI is a modern software company and a pioneer in digitalizing road and street maintenance and electricity grid maintenance. Cost efficiency is obtained through full control and real-time insight into planned and performed maintenance activities. With optimized solutions for specific tasks, role and user permission management, versatile map tools, IoT, system integrations and many other advanced features, we help customers

improve infrastructure maintenance significantly. The Autori system runs on the Microsoft Azure cloud, providing a robust, safe and scalable platform for continued international expansion.

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SUPEROPERATOR

DIGITAL CAR WASH SOLUTIONS

SUPEROPERATOR is a pioneer in the car wash industry, helping operators grow through digitalization. Simplicity, safety and scalability drive our way. The Superoperator technology has been tested since 2012 and offers a simple and safe way to turn any type of traditional car wash digital. It allows convenient in-out car wash experience with contactless access and secure, GDPR-compliant transactions. Other car service industry operators benefit from our constantly growing brand-independent car wash network by offering their value-added services to mobility engaged drivers.

With a head office in Kuopio, Finland, our highly motivated professionals in Finland, the Czech Republic, Germany and Poland run the daily operations.

CONTACT

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BloxCar

HIRED CARS FROM LOCALS

BLOX CAR is a peer-to-peer (P2P) platform that enables car sharing between private people. Our mission is to enable a more sustainable way to use private cars. The service helps car owners turn the second largest household expense into a source of income. For renters, this approach also offers a wide range of cars in versatile locations and is the cheapest way to rent a car. Blox Car includes a free car search widget that lists cars by specific criteria on their homepage. Housing companies, for example, can list shared cars in their neighborhood and

arrange other benefits, such as designated parking places for shared cars. Hotels and companies can provide more value to their guests and employees by offering locally shared cars directly on their website.

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SOLUTIONS AND PRODUCTS FOR SMART MOBILITY

INFOTRIPLA provides cost-effective, innovative solutions for traffic information and road maintenance management. Together with modern data management and exchange, information analytics enable smart mobility services for smart cities, roads and road maintenance operations. Because our solutions are based on a flexible cloud-driven engine, customers can select the right combination of modular product elements and receive replicable and flexible products. Infotripla's solutions are offered as a service to maximize flexibility without large investments or in-house

system management and development. Infotripla's customer-proven products are widely used by cities, authorities, map and navigation companies and infrastructure maintenance companies. Infotripla is part of the Arctic Machine Group, which includes the Aebi Schmidt Group.

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NODEON

YOUR TECHNOLOGY PROVIDER

NODEON FINLAND is a growth-oriented technology provider established in 2013. We specialize in the design and implementation of technology solutions in critical infrastructure environments.

We help our customers increase system intelligence, system automation and information gathering in all stages of operations. We provide solutions for real-time monitoring and optimization of system operations, safety improvements as well as the planning and automation of operations.

Our expertise is built on four technological pillars – software design, data

communication solutions, automation and electrical engineering. Our core competence involves challenges in which all areas of our expertise are combined into a seamless overall solution and delivery. We can provide services ranging from design and consulting at the initial stages of a solution to delivery of solutions and their life-cycle management.

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IMPOSSIBLE THINGS MADE EASY

HALTIAN is a trusted IoT and product development partner aiming to exceed customer expectations at every turn. Thingsee, the proven IoT Solution Suite developed by Haltian, enables fast IoT launches, from small pilots to mass-scale deployments. We make IoT easier by combining sensor and gateway devices, connectivity, device management and end-user applications, so our customers get a complete IoT service that supports their business right out of the box. Haltian also provides comprehensive RGD services for wireless devices, from

concept development to mass production. We specialize in miniaturized, wireless products with low power consumption. Haltian is behind many global signature products.

CONTACT

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VINKA

NEXT GENERATION OF FLEET AUTOMATION

THE VINKA MOBILITY PLATFORM automates any on-demand mobility operation, such as taxis, public transport, special needs transportation, last-mile logistics or autonomous fleets. The platform manages the delicate balance between customer service and optimization and aggregates different transportation needs into a single operation, giving the fleet the opportunity to perform at its best. Ride sharing, smart dispatch, route optimization, fleet communication and monitoring are all included in one automated platform.

Vinka is a smart mobility startup with a focus on fleet automation. Vinka's superior advantage is its know-how and experience in automated ride sharing and route optimization. Vinka can work with passengers

or goods, with a driver or driverless, and all Vinka's services are paratransit-ready.

Vinka provides software components for fleet automation and optimization. We can provide a full fleet management system or components to build new and update existing systems and platforms. Vinka's business covers the B2B and B2G sectors with fleet operators, dispatch system providers, public transport operators and MaaS operators.

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ultra

GROWTH BY DESIGN

ULTRA'S areas of expertise are vehicle, concept and industrial design as well as brand and strategic design. The co-founders of Ultra have a combined 35 years of automotive, product and strategic design experience from global OEMs and leading consultancies in Finland. Among Ultra's customers are Suzuki, Subaru, Honda, Rolls-Royce, Wärtsilä and many more.

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YOUR MOBILE BIKE SHOP

YEPLY transforms and digitalizes the old-fashioned bike maintenance industry by bringing bike service to people and making it an exciting, fun and fast experience. Yeplly operates with 20 service units in Finland and Germany. We have ambitious growth plans – we aim to become the best and biggest bike service in the world and to create a digital ecosystem for bike owners. Our bike maintenance services are offered as a single purchase or membership

model to consumers. Yeplly offers bike maintenance services to businesses and our digital platform to bike manufacturers and bike shops. WE KEEP YOU RIDING.

CONTACT

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www.yeplly.fi / www.yeplly.de



WIRELESS IOT CONNECTIVITY

WIREPAS is an international technology company focused on IoT connectivity software development. We offer our clients a development environment, which ensures the flow of data between devices and backend reliably. All of this is possible thanks to our extremely experienced, ambitious and passionate team. Wirepas is focused on industrial-grade, large IoT applications. This is where Wirepas Mesh can make a unique impact – and also where the majority of the connected devices are going to be. Wirepas Mesh software

provides wireless connectivity for IoT with superior energy efficiency, scalability and reliability. IoT devices form the wireless network automatically without any external infrastructure, providing the lowest lifetime costs.

CONTACT

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AUTONOMOUS LAST-MILE MOBILITY

ROBORIDE offers safer, sustainable and affordable mobility based on autonomous vehicles. We provide a turnkey approach to the first and last mile. As we are not locked to a certain vehicle manufacturer or technology supplier, we are able to choose the best solutions on the market for a service that meets our customers' needs. Our service is based on an on-demand operational model optimizing the usage of vehicles and providing a higher service level. Our solution fully complies with relevant EU regulation on clean vehicles (2019/1161). Robo service is an all-encompassing solution, including

the vehicles needed, end-user applications and cloud capabilities. Maintenance facilities and daily utilization resources are planned locally according to the requirements of the client. Our pricing model is based on the number of vehicles needed and the service level required.

CONTACT

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DO MORE WITH LOCATION

QUUPPA has raised the bar for advanced location systems, delivering the world's most open, accurate and reliable location positioning. This is thanks to a unique combination of Bluetooth, the Angle-of-Arrival (AoA) and Angle-of-Departure (AoD) methodologies, advanced location algorithms and management software tools that have been developed over the course of more than 15 years. To date, the Quuppa Ecosystem has more than 170 partners around the world who use Quuppa's open positioning platform to deliver

accurate, cost-effective location solutions to companies in a range of industries, including manufacturing and logistics, retail, healthcare, sports, law enforcement and security, government, asset tracking and others.

CONTACT

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WIRELESS IOT PRODUCTS FOR MOBILITY, MANUFACTURING AND LOGISTICS

CONFIDEX is a trusted partner for industrial IoT applications throughout the world. Our service and the consistent quality of our products make up the DNA of our company. We are dedicated to providing a solution that matches our customers' requirements. Together with our partners, we build solutions for asset management, traceability and authentication, which are applicable in manufacturing and supply chains. Today, over 200 million assets are equipped with Confidex products.

We offer you a wide range of products and services for your needs:

- Standard radio frequency identification (RFID) and Bluetooth Low Energy (BLE) product portfolio based on our extensive R&D and manufacturing experience
- Personalization services for your specific needs
- Confidex DesignStudio™ to co-create a new product for your application

CONTACT

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THE FINNISH MARKET LEADER IN CAR SHARING

24 RENTAL NETWORK is a company focused on developing and operating mobility services and complementary information systems. This family-owned business has become the car sharing leader in Finland in 30 cities and with approximately 400 vehicles.

24Go has been a great addition to the product family with a car sharing service designed especially for urban needs.

CONTACT

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www.24rent.fi / www.24go.fi

Our services include:

- 24Rent – a station-based 24/7 car sharing service covering more than 30 Finnish cities
- 24Go – a minute-based free-floating car sharing service



MATTERSOFT
Member of the INTF Group

INTELLIGENT TRANSPORT SYSTEMS

MATTERSOFT LTD, a Finnish software company focusing on intelligent transport systems, provides solutions for attractive, efficient and greener public transport. We specialize in public transport information management and traffic signal priorities. We supply and maintain solutions independently or with our partners. The company's services include real-time passenger information, transit signal priorities as well as operative monitoring

and management. Mattersoft's customers include public transport agencies and transport operators.

CONTACT

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DESIGN IS MORE THAN APPEARANCE

LINK DESIGN AND DEVELOPMENT OY is a design agency for the modern world. Our passion is designing products and services that seamlessly combine the digital and physical worlds. We implement user-driven solutions based on researched information, a strong strategy and the customer's core competencies. Link Design experts help create easy-to-use products, like interactive and visual design, with a comfortable and logical user experience. Our diverse expertise in products, services and technology will help you develop appropriate,

interesting and customer-based solutions for the real world. We have become successful by offering strategic partnerships in product and service development with an absolute focus on both the user and the business side of design.

CONTACT

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MOPRiM

MOBILITY BEHAVIOR DATA FOR FUELING SMART MOBILITY

MOPRiM generates mobility behavior data for businesses operating mobility apps. Our user-level mobility behavior data can improve user experience, drive operational excellence and provide prediction or big data analysis. MOPRiM develops proprietary AI and machine learning algorithms, data engines for apps and cloud platforms. We collect and prepare our own training data with our proprietary tools. Our technology is able to recognize the most common transport modes – including bus, car, train,

tram, metro as well as walking, running and bicycling – to deliver true multimodal mobility data.

CONTACT

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PROFESSIONAL OPERATIONS AND MAINTENANCE FOR MODERN MOBILITY SOLUTIONS

ROLAN OY is a leading service provider for smart mobility in Finland. Founded in 2010, Rolan offers centralized, professional operations and maintenance for modern mobility solutions, maximizing the service level for citizens.

Rolan services include operations and maintenance services for car sharing, bike sharing, e-scooter fleets and charging networks. We also develop capabilities for the daily operations of autonomous vehicles, as well as concepts like managed bike parking and city service points for bike and scooter

parking, charging and maintenance. Rolan operations are supported with call center services and project management services to deploy turnkey mobility. Our service network covers 21 cities across Finland, and we maintain over 5,000 smart mobility vehicles 24/7/365.

CONTACT

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INDOOR POSITIONING TECHNOLOGY AND SOFTWARE

INDOORATLAS is a global Platform as a Service leader in indoor positioning. Its patented geomagnetic-hybrid technology utilizes the built-in sensors in smartphones to pinpoint a location indoors. It provides thousands of developers with a scalable platform to build location-based services without the need to purchase, install and maintain large, costly infrastructure. The platform supports both Android and iOS.

Customers can utilize the geoinformation provided to build indoor location-based services within their application.

CONTACT

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YOUR ROUTE TO SUCCESS

INTOIT creates smart and innovative SaaS solutions to manage passenger transportation in a new, cost-effective way. Our customers are able to streamline the complex management of different types of transportation, creating more efficient processes and adding value for the end customer. Our solution offers high value to manage group transportation and connects every stakeholder in the process with digital tools, including drivers, passengers and supervisors. Intoit's Movit is a transportation management and control system developed for cost-effective and successful passenger transportation. The system digitizes the

processes of passenger transportation from transportation planning to the actual transportation. Intoit's references include Cabonline Finland, a taxi company that runs transportation with Movit for the city of Espoo and several private companies. The company makes over 40,000 trips per month.

CONTACT

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API-FIRST POSITIONING PLATFORM FOR INDOORS AND OUTDOORS

PROXIMI.IO is a technology-agnostic positioning and navigation platform. Through algorithms and mobile software development kits (SDKs), you can enable accurate indoor positioning, seamless indoor-outdoor navigation, location analytics and other location-enabled services with your own mobile applications and services.

The technology is used across various sectors, ranging from indoor positioning within corporate offices to navigation functionality in amusement park applications and city-wide projects involving location-based messaging. Our technology is integrated into popular applications and resold by some of the largest technology integrators.

One solution using the Proximi.io technology is the HealthyPlaces application, developed together with air quality specialist Breeze Technologies. HealthyPlaces is a turnkey mobile application that allows citizens to see the air quality around them and to navigate from A to B along the healthiest route. The app combines satellite data and ground sensor data for real-time air quality information. The app will soon be launched European-wide in partnership with cities and corporations.

CONTACT

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3. ELECTROMOBILITY

Traffic causes 23% of all CO² emissions worldwide. In the future, though, mobility must achieve the goal of being CO² neutral. Electromobility is a crucial part of this development.

Finland is pioneering different technologies in electrification. The country's know-how covers the concepts of electric powertrain technologies, in-vehicle information, communication technologies and connected infrastructure, enabling the electric propulsion of vehicles and fleets.





VALMET AUTOMOTIVE

THE FAST LANE TO FUTURE VEHICLES

VALMET AUTOMOTIVE has over 5,000 employees working worldwide to make the future of vehicles a reality. In an era shaped by rapid change not seen since the invention of the car, we serve as a competent upstream partner for several leading automotive manufacturers.

Our clear focus on e-mobility, combining outstanding engineering with world-class manufacturing expertise in vehicles and battery systems, makes us an experienced partner for visionary ideas of automotive development in a rapidly evolving industry.

Valmet Automotive is involved in all stages of electric vehicle engineering and manufacturing. We are a Tier 1 supplier for electric vehicle battery systems. Additionally, we provide kinematic solutions and convertible roof systems.

CONTACT

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DEFINING CHARGING

KEMPOWER develops fast-charging solutions that fit any electric vehicle on the market. Our fast charger family ranges from a movable 40 kW trolley to megawatt-scale charging systems. Our chargers can be operated outdoors in any environment, from dusty mines to seaside locations. Kempower is a reliable choice for all electric passenger cars, public transportation, commercial fleets and heavy-duty vehicles.

CONTACT

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WE WORK TOWARD A CLEANER FUTURE FOR MOBILITY

VIRTA is a global leader in electric vehicle (EV) charging platform technologies. Our vision is to enable the transition toward sustainability. We bring electric mobility to people's daily lives and make EVs a crucial part of tomorrow's energy system. Virta was founded in 2013. Today, we are one of the fastest-growing platform companies in the industry. Virta future-proofs over 300 customers and more than 50 brands around the world in 28 countries. We offer

the fastest and most cost-effective digital platform to launch, grow and operate commercial services in this EV charging ecosystem – as a primary business or as a value-added service.

CONTACT

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ELECTRIC VEHICLE CHARGING NETWORK MANAGEMENT

FORTUM'S electric vehicle charging network is operated on a cloud-based SaaS platform and can be licensed for commercial use worldwide. The Fortum Charge & Drive platform already handles hundreds of thousands of charging sessions per month, from thousands of connected chargers. Fortum Charge & Drive provides software, white-label consumer apps and a personal commitment to help grow your charging business.

CONTACT

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www.fortum.com/media/2017/06/charge-drive-smart-solutions-e-mobility

echargeie

ANYONE CAN SELL ELECTRICITY TO ANYONE

CATION'S ECHARGIE allows anyone with the app to sell electricity to anyone – for any electric vehicle, from any standard wall socket – anytime. Buyers can find the devices and pay the charging online in the app. Sellers can use the app to set the selling price and availability of the devices. In one hour, it's possible to charge a 10–25 km range for your electric vehicle, depending on the socket type you use for charging.

CONTACT

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REVONTE

SMART AND CONNECTED E-BIKES

Remember how easy and fun riding a bike as a kid was? With the **REVONTE ONE** drive system, you can experience that effortless pleasure again, now packaged in a compact, beautiful design. E-bikes with Revonte ONE are not only fun to ride, but also smart and connected to your digital life.

CONTACT

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Linkker

IMPROVING THE QUALITY OF CITY LIFE

LINKKER Intelligent eMobility platform accelerates the transition to emission-free mobility by providing technology and solutions for the local production of electric buses and electric drive lines. Linkker electric buses offer very high energy efficiency and high operational performance. The benefits are improved timetable performance, higher daily mileage and continuous operation with lower cost.

CONTACT

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INGENIOUS E-BIKE

PINTONE'S SledGO is an ultra-light e-bike, providing an easy and fun way to move. It is a good choice when bicycling is too hard, public transportation out of reach or the usage of one's own car too expensive. On cycle paths, SledGO can go up to 25 km/h. It can cover distances of up to 50 km with a 4-hour charge or up to 100 km with a dual battery. SledGO is legal in the EU and most US states. SledGO is designed in Finland for Nordic weather conditions. The aerodynamic and ultra-light e-bike is safe for riders and their passengers.

CONTACT

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INCREASE YOUR TEST DRIVES AND SALES

DRIVECO'S Test Drive Tool is a cutting-edge solution for new vehicle sales and marketing, mainly for hybrid and electric vehicles. As proof of the tool's success to date, it has been implemented in partnership with OEMs, such as Audi, Hyundai, Kia, Lexus, Mazda, Mercedes-Benz, Mitsubishi and Toyota. Driveco's aspiration is to retain the market-leader position within this selected product segment. Automotive OEMs in more than 40 countries globally are currently using our Transparent Test Drive Tool. The tool is used for consumer

sales, fleet sales, test drive events, press engagement and new vehicle launches in over 3,000 automotive showrooms. The tool has already hosted more than 2 million test drives in total. Every 50 seconds, a new test drive is initiated through Driveco's Transparent Test Drive Tool.

CONTACT

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EV CHARGING SOLUTIONS FOR LARGE PROPERTIES

PARKING ENERGY develops and operates some of the world's largest EV charging solutions for the real estate sector, enabling all parking bays through our innovative cabling systems and providing charge points as a service.

The Parking Energy solution provides everything a real estate owner needs – Cost-efficiency, matching the actual demand through a scalable solution, minimum disruption, future-proof, simple processes for the real estate owner and an increase in the property value.

As EV charging is becoming a requirement for attracting the best tenants, Parking Energy has an advantage as the Parking Energy solution is complete and fits the needs of its target customers exceptionally well.

CONTACT

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ENSTO

ELECTRIC VEHICLE CHARGING

THE ENSTO EV Charging product range includes our attractive, modular, high-performance electric vehicle charging stations. We are a leading expert in developing and manufacturing high-quality charging products and services for electric vehicles.

We focus on smart EV charging, and we mean that literally. With smart grid-ready products and cloud-based services, our environmentally friendly EV solutions are designed to make life better for you and your business.

CONTACT

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ELECTRIC CAR AND ELECTRIC POWERTRAIN SYSTEM MANUFACTURER

TOROIDION 1MW is a high-performance electric supercar, combining the power of four direct-drive electric motors and state-of-the-art rapid swap battery technology. Toroidion's extra-low-voltage electric powertrain technology for revolutionary safety makes the 1MW lightweight and energy efficient. A Toroidion 1MW customer can swap the batteries in seconds and select between rechargeable high-performance or long-range batteries. Rapidly swappable battery packs slide neatly into the protective chassis of the car in seconds.

Toroidion also supplies completely safe extra low-voltage powertrain systems with direct-drive motors for the vehicles of automotive OEM clients. Additionally, we provide R&D support for the electric vehicle builds of OEMs.

CONTACT

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POWERING YOUR SOLUTIONS

L7 DRIVE LTD is a clean technology company designing and engineering leading-edge smart energy subsystem technologies. Our expertise in power electronics optimization, through the application of our proprietary control technology, enables new levels of performance without sacrificing safety, reliability and cost that the industry demands.

L7 Drive's core is an innovative power electronics technology that can be employed in a wide variety of electric-powered platforms.

CONTACT

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4. TESTING

Finland offers numbers of public and private test beds and living labs for testing smart mobility solutions and 5G networks in an excellent technical and legislative environment.

The transformation and digitization of the vehicle market require constant development in the vehicle testing sector. Finland's test beds are ideal for testing all things new in mobility. For example, Lapland in Northern Finland is known for its state-of-the-art facilities and know-how of automotive winter testing.

For decades, several OEMs and Tier 1 suppliers have used these testing resources. Special tracks exist to test vehicle dynamics and snow-handling capabilities. Plus, a unique test ecosystem and platform is ready to even test autonomous driving.

Finland is home to several world-class winter test facilities and service providers:

- Lapland Proving Ground
www.laplandpg.fi
- Arctic Testing Services
www.arctictesting.fi
- Arctic Driving Center
www.arcticdrivingcenter.fi
- Testworld by Millbrook
www.testworld.fi
- Lapland Driving
www.laplanddriving.fi/en

The country also offers an enthusiastic mobility scene, excellent solution builders, city infrastructure for piloting ideas and communities of citizens eager to try out new transportation and logistics solutions.



SNOWBOX

ARCTIC AUTONOMOUS DRIVING

TEST BED FOR CONNECTED AUTOMATED VEHICLES IN THE ARCTIC

SNOWBOX is a comprehensive winter test bed and snow-how ecosystem for connected and automated vehicle technologies. It provides testing on public roads, cross-border corridors and safe proving grounds with necessary workshops and offices through its partners. Testing facilities are completed by digital infrastructure and information services as well as engineering and Aurora SnowTeam expertise to support the self-driving vehicle industry and academia in their development efforts. The Snowbox test bed is designed for those who want to obtain weather-proof technological solutions and tackle harsh weather and

difficult driving conditions, which are the biggest problem for autonomous driving performance. Snowbox is in the North, 200 km above Arctic Circle, where the ground is snow-covered for about half the year, the temperature can dip down to -40 °C and the polar night lasts approximately one month.

CONTACT

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BEYOND THE SURFACE

ROADSCANNERS is specialized in developing tools and services for traffic infrastructure asset management. The main focus of Roadscanners' activities is structural and functional condition monitoring and analysis of roads, streets, bridges and airports. Roadscanners believes proactive maintenance policies that react to the early phase symptoms and fix the root cause of the problem will play a key role in next-generation road asset management. The company provides consulting services, hardware systems and software.

CONTACT

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HIGH-TECH SYSTEM AND SOLUTION SUPPLIER FOR AUTOMOTIVE INDUSTRIES

PROVENTIA is a technology company offering solutions and services for the engine, machine and vehicle industries to help solve global air pollution. Proventia provides modular test laboratories and centers for the development and testing of electric vehicles, engines, powertrains, hybrid systems and battery packs. Proventia develops and manufactures exhaust aftertreatment systems for diesel engines, work machines and heavy vehicles. Leading European vehicle manufacturers are developing and testing their zero-emission vehicles of

the future using Proventia's modular test solutions. Proventia's emission control references include top non-road engine and machine manufacturers and clean air projects in European Low-Emission Zones and in major Asian cities.

CONTACT

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Robotic
Software
Testing

CONFIDENCE IN CODE

QENTINEL specializes in the quality of digital products, platforms and ecosystems. Qentinel Pace is a scalable, trustable and robust test automation solution for software-intensive systems.

By making quality transparent, Qentinel Pace accelerates time to market and reduces the costs of testing:

- Supports web, desktop and mobile
- Supports Android automotive and IoT connectivity
- Up-to-date adaptive AUTOSAR test interface libraries

- Switch gears in test automation 10–20 times faster
- 90% reduction in quality assurance time and 70% reduction in quality assurance costs

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TESTILABS

UNIQUE CAMERA AND RADIO TEST SOLUTIONS FOR THE AUTOMOTIVE INDUSTRY

TESTILABS provides advanced camera and radio performance tests in addition to regulatory certification test services.

High dynamic range (HDR) imaging is very important in automotive camera systems. A good example of this is when a car drives through a tunnel. The car camera needs to see details simultaneously inside and outside the tunnel.

Our camera lab includes the latest technology for HDR testing, and we are already serving leading automotive camera developers.

We help our customers select the right camera module for their automotive or moving machinery. Cars, tractors and excavators are full of different kinds of radios like cellular, GPS, Bluetooth, WLAN and radars.

Our experts and test capabilities can ensure that the radios are performing well and do not disturb each other, also known as desensing.

We can build different, tailored radio frequency (RF) test environments and methods to suit each customer's particular test need.

CONTACT

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Verkotan

SEEING THE WORLD THROUGH ANTENNAS

VERKOTAN provides wireless test solutions and services so the world can be seen through antennas. Our roots are in cellular phone R&D, covering all technologies from the 1st to the upcoming 6th generation. We provide over-the-air (OTA), beamforming (BF) antenna and radio frequency (RF) exposure testing and comprehensively tailored test solutions. We have developed our own active and passive antenna measurement systems based on near-field-far-field (NF-FF) transformation, for example, for 5G BF antennas.

Our unique GPS air performance test lets you test your device's GPS air performance in any environment you want. We are actively participating in R&D projects with research institutes and leading companies and are seeking new state-of-the-art solutions. We are a fast, flexible and reliable partner for our customers' R&D and always find the best testing solutions to match their needs.

CONTACT

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GRANT4COM

PRODUCT TESTING AND MARKET ACCESS SERVICES

GRANT4COM is an accredited test house that offers a comprehensive portfolio of testing and certification services. Our long experience and innovative product validation extend from complex mobile devices to smart IoT solutions. This makes us the perfect partner in product development, all the way from the drawing board to the end of life. Our labs have helped numerous companies give birth to products used by millions around the world.

Grant4Com's services include accredited and pre-compliance electromagnetic compatibility (EMC) and safety testing, along with environmental and mechanical testing. We provide a wide range of services

that cover all your needs in different phases of the product development process, such as failure analysis, market access and Bluetooth qualification services.

Grant4Com's customers include product companies and R&D service companies. Some examples include Haltian, Oura Health, Bittium, Optomed and Huddly.

CONTACT

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5. RESEARCH

RELIABLE R&D RESOURCES

Finland has numerous world-class R&D facilities that are taking mobility to the next level. The country has a long history of investing in high-quality education, especially in the field of technology. As a result, the country has double the number of R&D researchers per capita compared to the US and a third more than Germany.

Talented Finnish engineers work productively to solve specific problems at top-notch R&D facilities throughout the country.





RESEARCHING AUTONOMY

AALTO UNIVERSITY Autonomous devices, such as self-driving cars, unmanned aerial and marine vehicles and smart factory robots, are rapidly becoming mainstream. When these objects are connected, they form large-scale, networked autonomous systems that must coordinate their actions and function interactively with human users in a seamless way.

Autonomous systems is a rapidly developing field that helps further digitalize the society by facilitating new services, increasing productivity, improving safety and using resources more efficiently.

Aalto has also researched vehicle platform ecosystem business models and their impact on platform development. See more at: www.acas.fi

CONTACT

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DIGITALIZATION OF AUTOMOTIVE AND TRAFFIC SOLUTIONS

THE UNIVERSITY OF OULU carries out wide-scale research on automotive and traffic solutions. We study machine and automotive technologies, fairways, digitalization and software, sensor technologies, 5G/6G communications and related business models, while focusing on land traffic systems. The research is networked internationally and nationally. It is traditionally conducted in close cooperation with Finnish industry, such as the companies in the Oulu Automotive Cluster.

We study and develop solutions deploying the latest technological innovations to improve the efficiency, reliability, robustness and cost effectiveness of the traffic systems, covering both vehicles

and road infrastructures. In the 6G flagship program, research on software and services, and research on intelligent systems, automotive and traffic topics are among the key focus areas of the Faculty of Information Technology and Electrical Engineering. This research is supported by the automotive business research at the Business School of Oulu.

CONTACT

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FOSTERING FUTURE MOBILITY

VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD (VTT) is a state-owned and controlled non-profit limited liability company established by law. As an impartial research and technology organization (RTO) and with the national mandate and mission to support economic competitiveness, societal development and innovation, VTT carries out research and innovation activities for the needs of industry and a knowledge-based society. In 2019, VTT's net turnover was EUR 147.2 million, and other operational incomes were EUR 97.7 million, with highly educated personnel numbering 2,083. VTT's mobility and transport research fosters the value-driven, adaptive and responsible future mobility of people and goods. VTT provides applied research to more than 200 companies internationally.

VTT's research facilities are composed of a versatile fleet of automated vehicles – 3 passenger cars, 1 off-road vehicle, 2 buses and a mobile roadside unit. The vehicles are equipped with 5G, C-V2X, ITS-G5 connectivity and modern automotive sensors, like LiDARs, inertial measurement units (IMUs), cameras and radars.

VTT is developing software algorithms for tackling automation challenges in adverse weather. VTT is a well-known partner in evaluating, validating and assessing the impact of automated driving systems. The engine and vehicle laboratory research is suitable for passenger cars as well as heavy-duty vehicles up to 60 metric tons. We focus on energy efficiency, lower emissions, the use of second-generation biofuels, electric powertrains, energy storage and vehicle fleet and route simulation. In the area of zero emissions, VTT has a state-of-the-art battery laboratory for validating battery cells, modules and packs. It also has experimental and modeling capabilities for electrical machines and drives, as well as fuel cells and hydrogen for mobile applications.

CONTACT

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INTERDISCIPLINARY RESEARCH ON HUMAN-TECHNOLOGY INTERACTION

TAMPERE UNIVERSITY (TAU) is well known for its world-class research and active industrial collaboration, where it ranks #1 of the universities in Finland. Knowledge and novel inventions are effectively developed into practical use through close collaboration, networking and a well-functioning innovation ecosystem.

TAU's research on automotive systems and smart traffic is concentrated in the TAUCHI Research Center, which conducts interdisciplinary research on human-technology interaction. The research covers all aspects from prototyping new technologies and constructing interactive systems to experimental research and user experience studies. TAUCHI's special expertise is centered on understanding the use of different human senses and interaction technologies, including haptics, speech, gestures, gaze, psychophysiological measurement and their multimodal combinations.

This knowledge is applied in different industrial sectors, including the telecommunications, machinery, robotics, automation and automotive sectors.

Typical results from co-innovation with industry include functional novel user interfaces, scientific evidence for their performance, co-publishing results and co-patenting new technologies. TAU has led several projects in the fields of automotive interaction, smart traffic ecosystems and smart mobility. Currently, TAU coordinates a large consortium that focuses on multimodal in-vehicle interaction with 11 companies from the automotive sector.

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MOBILE-SYSTEM DRIVE-TRAIN COMPONENTS

LUT UNIVERSITY carries out research on the drive trains of mobile systems, like off-road machines, heavy vehicles and passenger cars. Our innovative cooling solutions and excellence in high speeds enable very high specific power – power per mass – machines.

LUT has the target of creating the world's highest specific power electric machine, which can power a heavy truck or supercar – or even an airplane – in a very compact form and mass.

In addition, we study the possibilities of building new drive-train systems for the hybrid vehicles of the future. We have carried out a research and development project in which we developed a multiple-shaft micro-gas turbine concept

to produce high-efficiency electricity in a small power range of 20 kW. Such a device can use any gaseous or liquid fuel, making it suitable for the future needs of the solar-powered world. It also enables electric cars to be equipped with a small high-power battery, as the vehicle's longer range can be achieved with chemical energy storage.

At LUT University, we constantly develop new technologies for more electric concepts in all fields of mobility.

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SMART MOBILITY INNOVATION HUB

METROPOLIA UNIVERSITY OF APPLIED SCIENCES in Finland provides studies in the Helsinki capital region in the fields of business, culture, healthcare and social services and technology. We focus on innovation and applying existing research results in joint projects and close cooperation with relevant industries under five thematic innovation hubs, creating national and international ecosystems.

The Smart Mobility innovation hub provides expertise and collaboration for developing new technologies and service solutions for traffic, logistics and human needs. From 2016 onwards, we have tested electric automated shuttle buses on open roads in Finland and abroad. Our staff is highly qualified experts. The innovation hub is linked to our degree program in automotive and mechanical engineering, providing students with the possibility of project work. Our workshop has created passenger vehicle

prototypes, such as the electric supercar Angelica and the biomaterial-based Biofore Concept Car. We develop and manufacture prototypes, demonstrators and concepts, perform tests and analysis services, consult in design, improvement and measurement projects, as well as provide courses and knowledge.

We welcome partners, service providers, technology companies, investors and researchers to join us in the creation of smarter mobility to benefit users. Together with users, we design the future of smart mobility.

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NETWORKING THROUGH ECOSYSTEMS

Working together is a core belief in Finland, and one of the drivers that keeps the country moving swiftly forward. Today, Finland's Smart Mobility Ecosystem is a vast network of large and small companies, universities and research institutes, all working together to produce the next-generation mobility services.

Business Finland plays an important role as an accelerator for the co-creation and co-innovation that happens within the ecosystem, providing vital funding that gives new ideas a solid start on the road to success.

Special Smart Mobility Ecosystems:

- **MIVI** – aims at growing the international competitiveness and recognition of Finnish companies working in the automotive industry or related fields. In September 2020, the Origo Steering Wheel created by the MiVi ecosystem won the German Design Award 2021 for outstanding design quality. Further info <https://mivi.info>

- **THE 5G-SAFE-PLUS** project aims at preventing traffic accidents and avoiding casualties by delivering 5G-enabled time-critical road safety services to vehicles. The accurate road weather, safety and maintenance information plays a key role together with direct incident/accident event information. The project will support wide-scale implementation and usage of advanced road weather, safety and maintenance services with enhanced 5G networking capabilities and service enablers. Further info <https://5gsafeplus.fmi.fi>

For companies wishing to relocate to Finland, Business Finland can also support you in many practical ways. We'll help you find opportunities, navigate the system and set up in Finland. All Business Finland services are completely free of charge and handled with full confidentiality. Just ask us more.

6. WHY INVEST IN FINLAND?

Home to world-famous Formula 1 drivers and rally racing legends, Finland is a country of cars and engineers. Talented Finnish engineers are behind world-famous innovations, such as Linux, MySQL, GIT, SSH, IRC and many more.

These innovative talents have also attracted first Porsche, followed by Mercedes-Benz, to acquire the OEM manufacturing facilities of the former Saab plant in Uusikaupunki, Finland.

With a Finland-based company, you gain skilled engineering and a digital-savvy workforce as well as access to the European markets.

Now, Finland is offering the best of its smart mobility expertise to the world.

WHAT'S FINNISH SMART MOBILITY?

Finland is home to dozens of startups and established companies building smart and connected autonomous vehicles that operate on land, air and sea. They fall under three main categories: 'Connected and Automated Driving' for autonomous vehicles, 'Electromobility' for electrification, and 'Mobility Services' for commercial and consumer services.

'Connected and Automated Driving' companies create hardware and software solutions for information and entertainment and other user interface and user experience solutions that a driver typically sees on the car dashboard. Behind the dashboard, there are Finnish companies working on how to safely use digital solutions to run, control, operate and maintain our next-generation smart vehicles.

'Electromobility' companies work to bring the most advanced electric vehicle solutions to the world. These companies design and manufacture electric cars for OEMs around the world, plan and execute smart EV charging solutions, build small and agile urban e-transportation vehicles, services and apps for local short distance needs – all pioneering technological advancements on a global scale.

The 'Batteries from Finland' program complements Finnish Smart Mobility companies' offering by ensuring a global battery development offering and a recycling re-use program right next to their production plants.

PART OF THE EU

As part of the European Union, Finland gives you access to the legislators who are writing the region's new regulations. This provides insight into upcoming changes and allows you to influence issues that are important to you and your business.

The European Union is relaxing the drone flying regulations starting July 1, 2020. This is an important change that will make

the EU an attractive region for urban air vehicle (UAV) development, testing and operations.

Intellectual property rights (IPRs) and data security are governed within the EU, giving you more power to protect your rights when operating within the EU. What's more, Finland has the lowest corporate tax levels in the EU along with very reasonable talent costs.

BUSINESS FINLAND

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